

**UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE**

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Rangeland

Site ID: R048BY004NM

Site Name: Mountain Loam

Precipitation or Climate Zone: 16 to 30 inches

Phase:

PHYSIOGRAPHIC FEATURES

Narrative:

This site occurs on gently sloping to moderately rolling uplands below or ranging into the ponderosa pine-Douglas fir woodlands. It may occur on open parks within the true woodlands. Slopes range from 3 to 20 percent. Elevation ranges from 7,600 to 8,800 feet above sea level.

Land Form:

1. Mountainside

2.

3.

Aspect:

1. N/A

2.

3.

	Minimum	Maximum
Elevation (feet)	7,600	8,800
Slope (percent)	3	20
Water Table Depth (inches)	N/A	N/A
Flooding:	Minimum	Maximum
Frequency	N/A	N/A
Duration	N/A	N/A
Ponding:	Minimum	Maximum
Depth (inches)	N/A	N/A
Frequency	N/A	N/A
Duration	N/A	N/A

Runoff Class:

Negligible to medium.

CLIMATIC FEATURES

Narrative:

The climate is characterized by cold, wet winters in which more than 50 percent of the total annual precipitation is received during the winter. The balance of the precipitation is received in the summer months, some of it in the form of high intensity thunderstorms. Average annual precipitation is about 22 inches but ranges from 16 to 30 inches and yearly fluctuations are common.

The average frost-free period is about 80 days but ranges from 60 days at the highest elevations to 110 days at the lowest elevations; however, the period lengths vary. The average last killing frost in the spring occurs about June 10th. The average first killing frost in the fall occurs about September 20th. Average annual air temperature is 22.6 degrees F in January and 64.5 degrees F in July with extremes ranging from -40 degrees F to 95 degrees F.

Climate data was obtained from <http://www.wrcc.sage.dri.edu/summary/climsmnm.html> web site using 50% probability for freeze-free and frost-free seasons using 28.5 degrees F and 32.5 degrees F respectively.

	Minimum	Maximum
Frost-free period (days):	67	93
Freeze-free period (days):	95	115
Mean annual precipitation (inches):	16	30

Monthly moisture (inches) and temperature (°F) distribution:

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	0.67	1.91	2.1	39.7
February	0.61	1.70	7.0	44.1
March	1.01	1.85	14.5	50.5
April	0.97	1.75	21.8	60.1
May	0.99	1.79	28.7	69.9
June	0.83	1.29	35.0	80.6
July	1.81	2.90	40.8	85.2
August	2.34	3.18	40.2	82.1
September	1.25	1.98	32.9	76.1
October	0.96	1.72	22.5	65.7
November	0.74	1.37	13.5	51.3
December	0.70	1.79	4.8	41.9

Climate Stations:

Station ID	Location	Period	
		From:	To:
291664	Chama, New Mexico	01/01/14	12/31/01
292700	Eagle Nest, New Mexico	11/01/37	12/31/01
292837	El Vado Dam, New Mexico	09/01/23	12/31/01
297323	Red River, New Mexico	01/01/15	12/31/01

INFLUENCING WATER FEATURES**Narrative:**

This site is not influenced by water from a wetland or stream.

Wetland description:

System	Subsystem	Class
N/A		

If Riverine Wetland System enter Rosgen Stream Type:

N/A

REPRESENTATIVE SOIL FEATURES

Narrative:

The soils are generally deep at the lower end of the landscape and gradually become moderately deep or even shallow at the upper end of the landscape. Surface textures are loams and silt loams with subsoils varying from loams, silty clay loams and clay loams to silty clays and clays. Permeability is moderate to moderately slow. Runoff is medium and available water-holding capacity is moderate to high.

Parent Material Kind: Alluvium

Parent Material Origin: Mixed

Surface Texture:

1. Loam

2. Silt loam

3.

Surface Texture Modifier:

1. N/A

2.

3.

Subsurface Texture Group: Loamy

Surface Fragments ≤3" (% Cover): 15 to 35

Surface Fragments >3" (% Cover): 15 to 35

Subsurface Fragments ≤3" (% Volume): 30 to 60

Subsurface Fragments ≥3" (% Volume): 15 to 60

	Minimum	Maximum
Drainage Class:	<u>Well</u>	<u>Well</u>
Permeability Class:	<u>Slow</u>	<u>Moderate</u>
Depth (inches):	<u>20</u>	<u>>72</u>
Electrical Conductivity (mmhos/cm):	<u>0.00</u>	<u>2.00</u>
Sodium Absorption Ratio:	<u>0.00</u>	<u>5.00</u>
Soil Reaction (1:1 Water):	<u>6.1</u>	<u>8.4</u>
Soil Reaction (0.1M CaCl₂):	<u>N/A</u>	<u>N/A</u>
Available Water Capacity (inches):	<u>6</u>	<u>12</u>

Calcium Carbonate Equivalent (percent):

N/A

N/A

PLANT COMMUNITIES

Ecological Dynamics of the Site:

Plant Communities and Transitional Pathways (diagram)

Plant Community Name: Historic Climax Plant Community

Plant Community Sequence Number: 1 **Narrative Label:** HCPC

Plant Community Narrative: Historic Climax Plant Community

This is a grassland site with only scattered shrubs and few, if any trees. Cool-season grasses and sedges dominate. Forbs are a minor component but are usually detectable when in bloom.

Canopy Cover:

Trees, shrubs and half-shrubs (average) 3 %

Ground Cover (Average Percent of Surface Area).

Grasses & Forbs 33

Bare ground 32

Surface gravel 7

Surface cobble and stone 3

Litter (percent) 25

Litter (average depth in cm.) 4

Plant Community Annual Production (by plant type): _____

Plant Type	Annual Production (lbs/ac)		
	Low	RV	High
Grass/Grasslike	702	897	1,092
Forb	45	58	70
Tree/Shrub/Vine	27	35	42
Lichen			
Moss			
Microbiotic Crusts			
Total	900	1,150	1,400

Plant Community Composition and Group Annual Production:

Plant Type - Grass/Grasslike

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
1	FEAR2	Arizona Fescue	115 – 230	115 – 230
2	POFE POA	Muttongrass Bluegrass spp.	92 – 138	92 – 138
3	CAREX	Sedge spp.	104 – 138	104 – 138
4	PASM	Western Wheatgrass	92 – 138	92 – 138
5	ACNEN2	Columbia Needlegrass	58 – 92	58 – 92
6	HECO26	Needleandthread	58 – 92	58 – 92
7	KOMA ELEL5	Prairie Junegrass Bottlebrush Squirreltail	58 – 92	58 – 92
8	MUMO MUWR FEOV	Mountain Muhly Spike Muhly Sheep Fescue	58 – 92	58 – 92
9	FETH AVSA ACRO7 2GRAM	Thurber Fescue Oatgrass spp. Sleepygrass Other Grasses	58 – 92	58 – 92

Plant Type - Forb

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
10	GRSQ ARAN7 ERIOG ACMI2 CALE27 PENST 2FORB	Curlycup Gumweed Silverleaf Cinquefoil Wildbuckwheat spp. Western Yarrow (Common) Golden Paintbrush Penstemon Other Forbs	35 – 81	35 – 81

Plant Type – Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
11	ARFR4 ARDO3	Fringed Sagewort Green Sagewort	12 – 35	12 – 35
12	RHTR RIMO2 QUERC JUNIP 2SD	Skunkbush Sumac Currant Oak spp. Juniper spp. Other Shrubs	0 – 35	0 – 35

Plant Type - Lichen

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Moss

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Microbiotic Crusts

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Other species that could appear on this site include: blue grama, galleta, pine dropseed, threeawn spp., Indian paintbrush, gilia, pussytoes, thistle, rabbitbrush, broom snakeweed, big sagebrush, winterfat and fourwing saltbush.

Plant Growth Curves

Growth Curve ID 3304NM

Growth Curve Name: HCPC

Growth Curve Description: Cool-season grassland with minor components of shrubs and forbs.

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	0	3	5	5	10	25	30	15	7	0	0

ECOLOGICAL SITE INTERPRETATIONS

Animal Community:

Habitat for Wildlife:

This site provides habitats which support a resident animal community characterized by black-tailed jackrabbit, badger, golden-mantled ground squirrel, Gummson's prairie dog, northern pocket gopher, chipping sparrow and mountain kingsnake. Mule deer, elk and turkey will use these sites seasonally.

Hydrology Functions:

The runoff curve numbers are determined by field investigations using hydrologic cover conditions and hydrologic soil groups.

Hydrologic Interpretations

Soil Series	Hydrologic Group
Cosey	B
Hesperus	B
Wellsville	B

Recreational Uses:

This site is well suited to picnicking, camping, horseback riding and hunting. The site alone is not noted for its beauty. However, when in association with adjacent woodlands and surrounding high mountains, this site presents a beautiful setting.

Wood Products:

No significant wood products are produced on this site on a sustained yield basis.

Other Products:**Grazing:**

Approximately 95 percent of the vegetation produced on this site are suitable for grazing or browsing by domestic livestock and wildlife. Grazing distribution need not be a problem as long as water and salt are adequately located. Salt can be moved periodically to improve grazing distribution.

Deterioration of the potential plant community is indicated by a decrease in Arizona fescue, bluegrass spp., western wheatgrass, Columbia needlegrass and prairie junegrass. Species that increase include sleepygrass, sedges, bottlebrush squirreltail, forbs and woody species. A planned grazing system with periodic grazing and rest is best to maintain the natural balance between plant species and to maintain high productivity.

In addition to domestic livestock, this site is well suited to deer, elk, small mammals and birds.

Other Information:**Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month****Similarity Index****Ac/AUM**

100 - 76

1.7 – 2.2

75 – 51

2.1 – 3.3

50 – 26

3.2 – 6.7

25 – 0

6.7+

Plant Part	Code	Species Preference	Code
Stems	S	None Selected	NS
Leaves	L	Preferred	P
Flowers	F	Desirable	D
Fruits/Seeds	F/S	Undesirable	U
Entire Plant	EP	Not Consumed	NC
Underground Parts	UP	Emergency	E
		Toxic	T

Plant Preference by Animal Kind:

Animal Kind: Livestock

Animal Type: Cattle

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Arizona Fescue	Festuca arizonica	EP	D	D	D	D	D	D	D	D	D	D	D	D
Western Wheatgrass	Pascopyrum smithii	EP	D	D	D	P	P	P	D	D	D	D	D	D
Prairie Junegrass	Koeleria macrantha	EP	D	D	D	D	D	D	D	D	D	D	D	D
Mountain Muhly	Muhlenbergia montana	EP	D	D	D	D	D	D	D	D	D	D	D	D
Columbia Needlegrass	Achnatherum nelsonii	EP	D	D	D	P	P	P	D	D	D	D	D	D
Spike Muhly	Muhlenbergia wrightii	EP	D	D	D	D	D	D	D	D	D	D	D	D
Bluegrass	Poa spp.	EP	P	P	P	P	P	P	P	P	P	P	P	P
Sheep Fescue	Festuca ovina	EP	D	D	D	D	D	D	D	D	D	D	D	D
Winterfat	Krascheninnikovia lanata	L/S	D	D	D	P	P	P	P	P	P	D	D	D

Animal Kind: Livestock

Animal Type: Sheep

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Western Wheatgrass	Pascopyrum smithii	EP	U	U	D	D	D	D	D	D	D	D	D	U
Prairie Junegrass	Koeleria macrantha	EP	D	D	D	D	D	D	D	D	D	D	D	D
Spike Muhly	Muhlenbergia wrightii	EP	D	D	D	D	D	D	D	D	D	D	D	D
Bluegrass	Poa spp.	EP	D	D	P	P	P	D	D	D	P	P	P	D
Mountain Muhly	Muhlenbergia montana	EP	D	D	D	D	D	D	D	D	D	D	D	D
Sheep Fescue	Festuca ovina	EP	D	D	D	D	D	D	D	D	D	D	D	D
Some Forbs	Various	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Winterfat	Krascheninnikovia lanata	L/S	P	P	P	P	P	P	P	P	P	P	P	P
Fringed Sagewort	Artemisia frigida	L/S	D	D	D	U	U	U	U	U	U	D	D	D
Sedge	Carex spp.	EP	U	U	D	D	D	U	U	U	U	U	U	U

Animal Kind: Wildlife

Animal Type: Elk

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Wheatgrass spp.	Pascopyrum spp.	EP	D	D	D	P	P	P	D	D	D	D	D	D
Bromegrass spp.	Bromus spp.	EP	D	D	D	D	D	D	D	D	D	D	D	D
Fescue spp.	Festuca spp.	EP	D	D	D	D	D	D	D	D	D	D	D	D
Needlegrass	Achnatherum spp.	EP	D	D	D	D	D	D	D	D	D	D	D	D
Bottlebrush Squirreltail	Elymus elymoides	EP	U	U	D	D	D	U	U	U	D	D	D	U
Orchardgrass	Dactylis glomerata	EP	D	D	D	D	D	D	D	D	D	D	D	D
Sedge	Carex spp.	EP	D	D	D	D	D	D	D	D	D	D	D	D
Rush	Juncus spp.	EP	D	D	D	D	D	D	D	D	D	D	D	D
Clover	Trifolium spp.	EP	P	P	P	P	P	P	P	P	P	P	P	P
Marigold spp.	Baileya spp	EP	U	U	D	D	D	D	D	D	D	D	D	U
Dandelion	Agoseris	EP	U	U	P	P	P	D	D	D	D	D	D	U

Animal Kind: Wildlife

Animal Type: Deer

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Serviceberry	Amelanchier utahensis	L/S	P	P	P	P	P	P	P	P	P	P	P	P
Hairy Mountainmahogany	Cercocarpus montanus	L/S	P	P	P	P	P	P	P	P	P	P	P	P
Winterfat	Krascheninnikovia lanata	L/S	D	D	D	D	D	D	D	D	D	D	D	D
Astragalus	Astragalus spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Lupine	Lupinus alpestris	EP	U	U	D	D	D	D	D	D	U	U	U	U
Penstemon	Penstemon spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Indian Paintbrush	Castilleja coccinea	EP	U	U	D	D	D	D	D	D	U	U	U	U
Dandelion	Agoseris spp.	EP	U	U	P	P	P	D	D	D	D	D	D	U
Geranium	Geranium spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Dock	Rumex spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Clover	Trifolium spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Phlox	Phlox spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Wildbuckwheat	Eriogonum spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Fleabane	Erigeron spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Larkspur	Delphinium confertiflorum	EP	U	U	D	D	D	D	D	D	U	U	U	U
Globemallow	Sphaeralcea	EP	U	U	D	D	D	D	D	D	U	U	U	U
Sweet Clover	Melilotus spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Fringed Sagewort	Artemisia frigida	L/S	D	D	D	D	D	D	D	D	D	D	D	D
Aster	Aster spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Thistle	Cirsium spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Sunflower	Helianthus spp.	EP	U	U	U	U	U	D	D	D	U	U	U	U

SUPPORTING INFORMATION

Associated sites:

Site Name	Site ID	Site Narrative

Similar sites:

Site Name	Site ID	Site Narrative

State Correlation:

This site has been correlated with the following sites: _____

Inventory Data References:

Data Source	# of Records	Sample Period	State	County

Type Locality:

State: New Mexico

County: McKinley, Rio Arriba, Sandoval, Santa Fe, Taos

Latitude: _____

Longitude: _____

Township: _____

Range: _____

Section: _____

Is the type locality sensitive? Yes ☐ No ☐

General Legal Description: _____

Relationship to Other Established Classifications:

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Other References:

Data collection for this site was done in conjunction with the progressive soil surveys within the Southern Rocky Mountains 48 Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys. Taos, Santa Fe, Rio Arriba, Los Alamos, and Sandoval county surveys.

Characteristic Soils Are:

Cosey	Hesperus
Wellsville	

Other Soils included are:

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Site Description Approval:

<u>Author</u>	<u>Date</u>	<u>Approval</u>	<u>Date</u>
Don Sylvester	03/23/82	Don Sylvester	03/23/82

Site Description Revision:

<u>Author</u>	<u>Date</u>	<u>Approval</u>	<u>Date</u>
Elizabeth Wright	02/26/03	George Chavez	10/31/03